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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,551	01/21/2004	Lukas Hahne	713-985	8633

33712 7590 10/01/2007

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EXAMINER	
MCDONALD, RODNEY GLENN	
ART UNIT	**PAPER NUMBER**
1753	

MAIL DATE	DELIVERY MODE
10/01/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/760,551	HAHNE ET AL.	
	Examiner	Art Unit	
	Rodney G. McDonald	1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-17 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-17 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 7-2004.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, line 1, the phrase "such as N_2" is indefinite because it is unclear if this phrase is meant to further limit the claim.

Claim 1, line 3, the phrase "for instance rapidly running lines of material" is indefinite because it is unclear if this phrase is meant to further limit the claim.

Claim 17, line 3, the phrase "for instance in the paper and textile industries" is indefinite because it is unclear if this phrase is meant to further limit the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

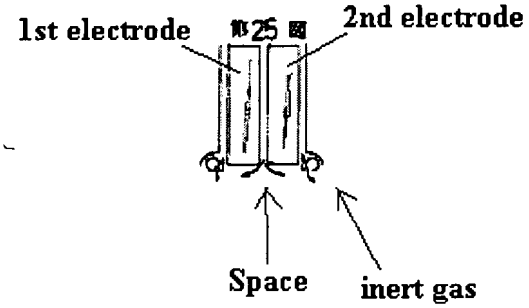
> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isaka et al. (Japan 58-225133) in view of Hahne et al. (U.S. Pat. 6,285,032).

Regarding claim 1, Isaka et al. teach an apparatus to replace atmospheric oxygen with an inert gas from the boundary layer of substrates moving in direction of advance. A first chamber opens toward the substrate (6) and is otherwise enclosed by surrounding space by a shield (2). The first chamber comprising in the vicinity of a front sealing edge a front corona electrode and perpendicular to the direction of advance and associated with a mate electrode (1) situated on the other side of the substrate (6). Also comprising a further corona electrode behind the front corona electrode on the same side and situated at the rear sealing edge, which is perpendicular to the direction of advance. The electrode being fed a high voltage and further comprising an electrode (1) of the substrate. Further comprising a device feeding an inert gas characterized in that the device feeding the inert gas directly behind the further corona electrode. (See Japio Abstract; Derwent Abstract; Fig. 1; Fig. 25; Annotated Fig. 25 below)



Regarding claim 2, in Fig. 25 the inert gas feeding device is an inert gas dispenser in the form of a nozzle configured near the substrate and enters the partial vacuum zone and points the same. (See Fig. 25)

Regarding claim 3, In Fig. 25 there is an inert gas dispenser fitted with a rear baffle running over the full width of the substrate and two lateral baffles running parallel to the direction of advance of the substrate. (See Fig. 25, Figs. 1, 2)

Regarding claim 4, In Fig. 25 the baffle is flush with the rear of the inert gas dispenser. (See Fig. 25)

Regarding claim 5, Fig. 25 demonstrate a first chamber constituted by the front corona electrode and by a further corona electrode, there are single upper and later covers as seen in Fig. 1. (See Figs. 1, 25)

Regarding claims 6, 7, the counter electrode is a guide roller (1). (See Abstract)

The difference between Isaka et al. and the present claims is that utilizing DC voltage to generate the corona discharge is not discussed (Claim 1), the mating electrodes are not discussed (Claim 1) and the counter electrode being grounded is not discussed (Claims 6, 7).

Regarding claim 1, Hahne et al. teach utilizing corona discharge by utilizing a DC voltage between two electrodes including a mating electrode. (Column 2 lines 32-45; Column 5 lines 37-68; Column 1-17)

Regarding claims 6, 7, Hahne et al. teach a grounded electrode. (See Abstract)

The motivation for utilizing the features of Hahne et al. is that it allows for removing the laminar boundary layer from the gaseous air flow. (Column 2 lines 19-22)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Isaka et al. by utilizing the features of Hahne et al. because it allows for removing the laminar boundary layer from the gaseous air flow.

Claims 8, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isaka et al. in view of Hahne et al. as applied to claims 1-7 above, and further in view of Kalwar et al. (U.S. Pat. 4,946,568).

The differences not yet discussed are where the corona electrodes are designed by a grid pitch. (Claim 8), is the use of a further chamber with additional corona electrodes (Claim 10), the covering of the electrodes is not discussed (Claim 11).

Regarding claim 8, Kalwar et al. teach the electrodes designed as a grid pitch for corona discharge. (Fig. 1, 9, 14-18)

Regarding claim 10, Kalwar et al. suggest further chambers with additional corona electrodes. (See Fig. 1)

Regarding claim 11, Kalwar et al. covering (10) for the electrodes. (See Fig. 1)

The motivation for utilizing the features of Kalwar is that it allows for high efficiency corona discharge. (Column 1 lines 62-65)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized the features of Kalwar et al. because it allows for high efficiency corona discharge.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Isaka et al. in view of Hahne et al. and Kalwar et al. as applied to claims 1-8, 10 and 11 above, and further in view of Izokh et al. (SU 1763024).

The difference not yet discussed is that offset corona electrodes are not discussed. (Claim 9)

Regarding claim 9, Izokh et al. teach corona electrodes offset. (See Izokh et al. Abstract)

The motivation for utilizing the features of Izokh et al. is that it allows for better degree of cleaning. (See Abstract)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized the features of Izokh et al. because it allows for better degree of cleaning.

Claims 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isaka et al. in view of Hahne et al. as applied to claims 1-7 above, and further in view of Stahl (EP 1199165 A1) and Obenshain (U.S. Pat. 4,329,212).

The differences not yet discussed are the use of an UV radiator fitted with a quartz pane, which seals it is mounted directly behind the inert gas nozzle the quartz pane running parallel to the substrate (Claim 12), the UV radiator jointly sealing a corona electrode beside a sealing mater electrode mounted behind the inert gas nozzle on the other side of the substrate is not discussed (Claim 13), the sealing mater electrode being a grounded guide roller is not discussed (Claim 14), the lateral electrode covers being designed to be a lateral cover laterally subtended along the

substrate and as far as the substrate's other side, the cover on the other side being sealed off by means of a lower chamber cover is not discussed (Claim 15), the sealing corona electrode together with the lateral covers and mate electrodes act as guide rollers that subtend the chamber (Claim 16) and utilizing the apparatus for printing is not discussed (Claim 17).

Regarding claims 12, 13, Stahl teaches using an UV radiator mounted after a corona discharge device. (See Abstract) Obenshain teach utilizing a quartz pane to allow UV radiation to pass through. (Column 3 lines 3-25)

Regarding claim 14, Hahne et al. already teach a grounded electrode. (See Hahne discussed above)

Regarding claim 15, Hahne et al. teach Fig. 25 demonstrate a first chamber constituted by the front corona electrode and by a further corona electrode, there are single upper and later covers as seen in Fig. 1. (See Figs. 1, 25)

Regarding claim 16, Hahne et al. teach the counter electrode is a guide roller (1). (See Abstract)

Regarding claim 17, Stahl teach using corona apparatus for printing. (See Abstract)

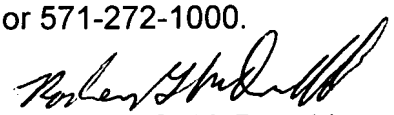
The motivation for utilizing the features of Stahl is that it allows for using the device for printing. (See abstract)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized the features of Stahl and Obenshain because it allows for using the device for printing.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney G. McDonald whose telephone number is 571-272-1340. The examiner can normally be reached on M-TH with every Friday off..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam X. Nguyen can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Rodney G. McDonald
Primary Examiner
Art Unit 1753

RM
September 24, 2007